Blended water well rehabilitation method

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Main construction for obtaining and presenting underground water are artesian bore holes. In the process of usage is observing reduction water well productivity and go out of use. One of the main reason of reducing water well's productivity is postponing filtering elements and near filter zone by saline postponing.

The main purpose of offered project is improving poor producing water wells that already exist without the time because there are ecological risk and high cost of drilling new wells. The goal of a current research project is to answer the question, under which conditions combination method is most effective for well regeneration. For this purpose was constructed an equipment and developed blended rehabilitation technology.

Developed new water well treatment technology by using selective influencing chemicals and compact equipment allows to prolongation the life of water wells.

The offering water well treatment chemicals have selective influencing character for removal of oxides and salts of Fe, Ca, Mg, Zn and etc. Effectiveness of this method is provided by using composition a few complexons in combination with solid CO2 and compact equipment for introducing of chemicals and controlling of treatment process. The most important advantages of combined water well rehabilitation method are:

1. Composition complexsons as selective influencing solvent is environmentally safe;

2. Excellent penetration and high selectivity of complexsons composition provides the greatest effect because complexsonates of metals have the high sensitive and it's easier for removal (to eliminate) after treatment process;

3. Using the dry ice will help to the maximal penetration to the clogging formation and nearfilter gravel zone and to do pressure and for partial dissolution of salt depositions;

4. A typical treatment time is 2-2,5 hours;

5. The developed water well regeneration equipment allows for introducing the chemicals and dry ice into the well and controlling the treatment process;

6. The combined rehabilitation method can fully restore the water well capacity and economic value to equal 15-20% from overall value of construction of new wells.